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1 UNITED STATES PATENT AND TRADEMARK OFFICE
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4 BEFORE THE BOARD OF PATENT APPEALS
5 AND INTERFERENCES
6
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8 *Ex parte* RANDALL SCOTT SPRINGFIELD and
9 JOSEPH WAYNE FREEMAN
10
11

12 Appeal 2007-3238
13 Application 09/824,595¹
14 Technology Center 2100
15
16

17 Decided: February 11, 2008
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21 Before HOWARD B. BLANKENSHIP, ALLEN R. MACDONALD, and
22 CAROLYN D. THOMAS, *Administrative Patent Judges*.
23

24 THOMAS, C., *Administrative Patent Judge*.
25

26 DECISION ON APPEAL

¹ Application filed April 2, 2001. The real party in interest is Lenovo Corporation.

I. STATEMENT OF THE CASE

2 Appellants appeal under 35 U.S.C. § 134 from a Final Rejection
3 of claims 1-12 entered March 27, 2006. We have jurisdiction under
4 35 U.S.C. § 6(b).

5 We affirm.

A. INVENTION

Appellants invented a system and method for ensuring that the computer system boots from a trusted source. (Spec., 1.)

B. ILLUSTRATIVE CLAIM

The appeal contains claims 1-12. Claims 1 and 6 are independent claims. As best representative of the disclosed and claimed invention, claim 1 is reproduced below:

1. A method for evaluating a boot source in a computer system having a processor comprising:

determining the boot source used by the processor each time the computer system boots, the boot source determining further including writing an identity of the boot source, the identity of the boot source including a location of a particular number of instructions initially executed; and

allowing the boot source to be specified once as a known boot source.

C. REFERENCES

The references relied upon by the Examiner in rejecting the claims on appeal are as follows:

Anderson US 6,161,177 Dec. 12, 2000

1 Grawrock US 6,678,833 B1 Jan. 13, 2004
2 (Filed Jun. 30, 2000)
3

D. REJECTION

5 The Examiner entered a Final Rejection on March 27, 2006 with the
6 following rejection which is before us for review:

7 Claims 1-12 are rejected under 35 U.S.C. § 103(a) as being
8 unpatentable over Grawrock in view of Anderson.

II. PROSECUTION HISTORY

11 Appellants appealed from the Final Rejection and filed an Appeal
12 Brief (Br.) on September 22, 2006. The Examiner mailed an Examiner's
13 Answer (Answer) on November 24, 2006. Appellants filed a Reply Brief
14 (Reply Br.) on January 22, 2007.

III. ISSUE

17 Whether Appellants have shown that the Examiner erred in rejecting
18 claims 1-12 as being obvious over Grawrock in view of Anderson.

IV. FINDINGS OF FACT

21 The following findings of fact (FF) are supported by a preponderance
22 of the evidence.

Grawrock

24 1. Grawrock discloses that “the term ‘information’ is defined as one
25 or more bits of data, address, and/or control.” (Col. 2, ll. 27-28.)

2. Grawrock discloses that “[t]he boot block is coded to (i) locate
Basic Input/Output System (BIOS), (ii) load the BIOS for execution, and
(iii) pass control to the BIOS.” (Col. 1, ll. 26-29.)

4 3. Grawrock discloses that “the ‘boot services’ may include a root of
5 trust such as a boot block code executed at the start of the initialization
6 process of the platform 100 to locate, load and pass control to the BIOS for
7 example.” (Col. 3, ll. 41-44.)

8 4. Grawrock discloses that “the boot block memory unit 220 provides
9 both boot services 250 during initialization and boot information to the TPM
10 230.” (Col. 3, ll. 39-41.)

11 5. Grawrock discloses that “the processor 310 performs a hash
12 operation on the boot information to produce a boot identifier 330. The boot
13 block identifier 330 is stored in memory 320. For one embodiment, the boot
14 block identifier 330 is calculated for each start-up of the platform 100.”
15 (Col. 3, ll. 59-63.)

16 6. Grawrock discloses that “[d]uring initialization, the boot block
17 memory unit loads and records its boot block identifier into memory of the
18 TPM (block 410). Next, the boot block memory unit locates and loads the
19 BIOS for execution (block 420).” (Col. 4, ll. 25-28.)

21 *Anderson*

22 7. Anderson discloses “a method for verifying that a selected system
23 BIOS is the correct BIOS for the computer system, for selecting the correct
24 BIOS from among multiple BIOS programs, and for reprogramming a
25 storage device with the correct BIOS if the correct BIOS is not present in the
26 computer system.” (Col. 1, ll. 14-19.)

1 8. Anderson discloses that “[t]he memory device may also contain
2 several different BIOS programs, one of which is selected by the startup
3 program as determined by the CPU data.” (Col. 3, ll. 35-38.)

4 9. Anderson discloses that “[t]he computer system also includes a
5 memory device containing a basic input/output system (‘BIOS’) program
6 and BIOS identifying data specifying the CPU or other chip set components
7 corresponding to the BIOS program . . .” (Col. 3, ll. 3-7.)

8

V PRINCIPLES OF LAW

10 Appellants have the burden on appeal to the Board to demonstrate
11 error in the Examiner’s position. See *In re Kahn*, 441 F.3d 977, 985-86
12 (Fed. Cir. 2006) (“On appeal to the Board, an applicant can overcome a
13 rejection [under § 103] by showing insufficient evidence of prima facie
14 obviousness or by rebutting the prima facie case with evidence of secondary
15 indicia of nonobviousness.”) (quoting *In re Rouffet*, 149 F.3d 1350, 1355
16 (Fed. Cir. 1998)).

17 The question of obviousness is "based on underlying factual
18 determinations including . . . what th[e] prior art teaches explicitly and
19 inherently . . ." *In re Zurko*, 258 F.3d 1379, 1383 (Fed. Cir. 2001) (citing
20 *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966); *In re Dembicza*, 175
21 F.3d 994, 998 (Fed. Cir. 1999); *In re Napier*, 55 F.3d 610, 613 (Fed. Cir.
22 1995)). "In rejecting claims under 35 U.S.C. § 103, the examiner bears the
23 initial burden of presenting a *prima facie* case of obviousness." *In re*
24 *Rijckaert*, 9 F.3d 1531, 1532 (Fed. Cir. 1993) (citing *In re Oetiker*, 977 F.2d
25 1443, 1445 (Fed. Cir. 1992)). "'A *prima facie* case of obviousness is
26 established when the teachings from the prior art itself would appear to have

1 suggested the claimed subject matter to a person of ordinary skill in the art.”
2 *In re Bell*, 991 F.2d 781, 783 (Fed. Cir. 1993) (quoting *In re Rinehart*, 531
3 F.2d 1048, 1051 (CCPA 1976)).

4

5 VI. ANALYSIS

6 *Grouping of Claims*

7 In the Brief, Appellants argue claims 1-12 as a group. In other words,
8 for claims 2-12, Appellants merely repeat the same argument made for claim
9 1. Thus, the Board selects representative claim 1 to decide the appeal for
10 this group. Accordingly, the remaining claims in this group stand or fall
11 with claim 1. 37 C.F.R. § 41.37(c)(1)(vii)(2006). *See also In re Young*, 927
12 F.2d 588, 590 (Fed. Cir. 1991).

13

14 *The Obviousness Rejection*

15 We now consider the Examiner’s rejection of claims 1-12 under
16 35 U.S.C. § 103(a) as being obvious over the combination of Grawrock in
17 view of Anderson.

18 Initially, we point out that we disagree with the Examiner’s finding
19 that “Grawrock does *not* disclose wherein the identity of the boot source
20 includes a location of a particular number of instructions initially executed”
21 (Answer 4).

22 Specifically, we find that while Grawrock discloses a boot block
23 memory unit that provides “boot information” to a trusted platform module
24 (TPM), whereby the boot information includes a boot block code
25 (Grawrock, Abstract and FF 4), the “boot block code” identified in
26 Grawrock is not necessarily limited to only boot code instructions itself.

1 For example, Grawrock specifically discloses that the boot block is
2 coded to “locate” the BIOS (FF 2) and that the term ‘information’ includes
3 address information (FF 1), i.e., location information. Again, Grawrock
4 discloses that the boot block is coded so as to *locate* the BIOS (FF 2-3) in
5 addition to loading and executing the BIOS. As such, we find that Grawrock
6 reasonably teaches that “boot information” *may* include address information
7 specifically pertaining to the location of the boot source.

8 Furthermore, Grawrock discloses that a hash operation is performed
9 on the boot information (i.e., boot address) to produce a boot identifier 330
10 and that the boot block identifier 330 is calculated for *each* start-up (FF 5).

11 Appellants contend that “the boot block identifier of Grawrock merely
12 corresponds to the contents of (instructions in) the boot source, not the
13 recited identity (location of instructions executed) of the boot source.” (Br.
14 9.) We disagree.

15 Having already found *supra* that Grawrock’s “boot information” may
16 also include “boot address/location”, it goes to follow that a hash operation
17 performed on a “boot address” will necessarily produce a “boot block
18 identifier” that represents a location of instructions initially executed.
19 Grawrock further discloses that during initialization, the boot block
20 identifier is recorded in memory, then the BIOS is located and loaded for
21 execution (FF 6), and that such a boot block identifier is calculated for each
22 start-up (FF 5).

23 In other words, Grawrock discloses determining the boot source each
24 time the computer system boots, including writing a location of the
25 instructions initially executed.

1 Regarding Anderson, Appellants contend that “Anderson fails to
2 remedy the defects of Grawrock. . . . Anderson describes determining
3 identifying data that merely determines whether the BIOS and hardware
4 correspond to the same central processing unit and chip set. This identifying
5 data is, therefore, distinct from the location of a particular number of
6 instructions initially executed.” (Br. 9-10.) Appellants further contend that
7 “nothing in Anderson indicates that each time the computer system boots the
8 identity of the boot source (locations of a number of instructions initially
9 executed) is written.” (Reply Br. 7.)

10 For at least the reason noted *supra* regarding Grawrock, we find that
11 Anderson is not needed to show the limitations argued above, because such
12 features are disclosed in Grawrock. However, we find that Anderson also
13 discloses the above-mentioned features.

14 For example, Anderson discloses a method for verifying that a
15 selected BIOS, amongst multiple BIOS programs, is the correct BIOS for the
16 computer system by comparing BIOS identifying data (FF 7-9).
17 Furthermore, the Examiner found that “the system disclosed by Anderson
18 must first select a BIOS for analysis out of a conventional EEPROM
19 memory unit which is capable of storing a plurality of BIOS programs . . .
20 the Anderson system must necessarily know what each BIOS’s address is so
21 as to be able to find it within said EEPROM. As the address of a particular
22 BIOS in the EEPROM is vital to the function of the Anderson system, there
23 exists at least the suggestion that it would be included as part of the BIOS
24 identifying information of Anderson.” (Answer 8-9.) We agree.

25 We find that both Anderson and Grawrock evidence the known usage
26 of location information, i.e., address information, in identifying a boot

1 source. It is also clear from an examination of the prior arts that those of
2 ordinary skill in the boot source art at the time of the invention would have
3 been familiar with using location information to identify a boot source.

4 Furthermore, unlike the Examiner, we do not consider the order in
5 which prior art is applied in a rejection to be significant. See, for
6 example, *In re Bush* 296 F.2d 491, 496 (CCPA 1961)

7 ("[i]n a case of this type where a rejection is predicated on two
8 references each containing pertinent disclosure which has been
9 pointed out to the applicant, we deem it to be of no significance,
10 but merely a matter of exposition, that the rejection is stated to be
11 on A in view of B instead of B in view of A, or to term one
12 reference primary and the other secondary."); *In re Cook*, 372
13 F.2d 563 (CCPA 1967).

14
15 Rather, the issue before us is whether the applied prior art teaches and/or
16 suggests all disputed limitations of representative claim 1. As discussed
17 above, the prior art provides multiple teachings of the limitation that
18 Appellants argue is missing from the prior art.

19 Thus, we find that the Appellants have failed to show error in the
20 Examiner's rejection. Therefore, we affirm the rejection of claim 1 and of
21 claims 2-12, which fall therewith.

22
23 **VII. CONCLUSIONS**

24 We conclude that Appellants have not shown that the Examiner erred
25 in rejecting claims 1-12.

26 Thus, claims 1-12 are not patentable.

VIII. DECISION

2 In view of the foregoing discussion, we affirm the Examiner's
3 rejection of claims 1-12.

4 No time period for taking any subsequent action in connection with
5 this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R.
6 § 1.136(a)(1)(iv) (2006).

AFFIRMED

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SAWYER LAW GROUP LLP
PO BOX 51418
PALO ALTO CA 94303